## (12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

## CORRECTED VERSION

## (19) World Intellectual Property Organization

International Bureau



01 DEC 2004

(43) International publication date

11 December 2003 (11.12.2003)

**PCT** 

(10) International publication number

WO 2003/102389 A2

(51) International patent classification<sup>7</sup>:

\_\_\_\_\_

(21) International application number:

PCT/FR2003/050004

F01N 3/035, 3/021

(22) International filing date:

3 June 2003 (03.06.2003)

(25) Language of filing:

French

(26) Language of publication:

French

(30) Data relating to the priority:

02/06,835

4 June 2002 (04.06.2002)

FR

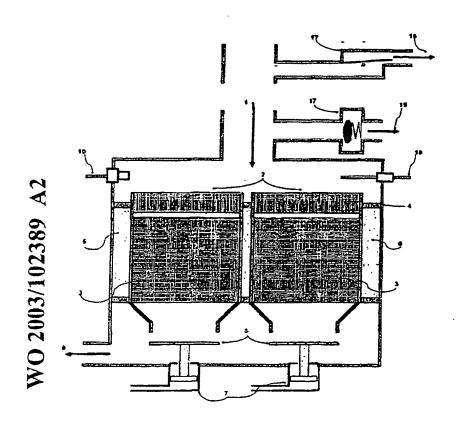
- (71) Applicant and
- (72) Inventor: FAYARD, Jean-Claude [FR/FR]; 44 ter rue Professeur Florence, F-69003 LYON (FR).
- (74) Representatives: CABINET PLASSERAUD etc.; 84 rue d'Amsterdam, F-75440 PARIS CEDEX 09 (FR).
- (81) Designated states (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

[continued on next page]

## As printed

(54) Title: METHODS AND DEVICE FOR FILTRATION OF EXHAUST GASES FOR A DIESEL ENGINE WITH A FILTRA-TION SURFACE WHICH IS VARIABLE BY MEANS OF CONTROLLED OBSTRUCTION

(54) Titre: PROCEDE ET DISPOSITIF DE FILTRATION DES GAZ D'ECHAPPEMENT POUR MOTEUR DIESEL À SURFACE DE FILTRATION VARIABLE PAR OBSTRUCTION COMMANDEE



(57) Abstract: The invention relates to particle filters for the exhaust gases of diesel engines. The aim of the invention is to optimise the process of filtration, particularly in terms of the regeneration of the filtration means, such as to provide a satisfactory solution to the problem of clogging of said filtration means by carbon particles. According to the invention, said sim is achieved with a method whereby all or some of the particles contained in the exhaust gases are retained on the filtration means and burnt due to the action of a combustion catalyst. characterised in obstructing at least a part of the filtration means when the temperature og of the exhaust gases for filtration is equal to or less than a threshold temperature 0s, such as to limit or avoid the cooling of the obstructed part of the filtration means and to maintain the same at a temperature 60 greater than or equal to 0s up until the time when 6g becomes greater than  $\theta$ s again and thus permits an accelerated regeneration of the obstructed part of the filtration means. The invention further relates to an exhaust gas filtration device